

R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

SUPPORT FOR CLAIM AMENDMENTS

Support for the amendments to the claims can be found in the drawings as originally filed, for example, in FIGS. 2-5 and in the specification as originally filed, for example, on page 7, line 6 through page 8, line 12. As such, no new matter has been introduced.

CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims, 1-2, 5-6, 10-15, 17-18 and 20 under 35 U.S.C. §103(a) as being unpatentable over Tang et al. (U.S. Patent No. 6,389,321, hereinafter Tang) in view of Lien et al. (U.S. Patent No. 6,446,242, hereinafter Lien) is respectfully traversed and should be withdrawn.

The rejection of claim 3 under 35 U.S.C. §103(a) as being unpatentable over Tang and Lien in view of Deming et al. (U.S. Patent No. 5,864,486, hereinafter Deming) is respectfully traversed and should be withdrawn.

The rejection of claims 4, 16 and 19 under 35 U.S.C. §103(a) as being unpatentable over Tang and Lien in view of

Rostoker et al. (U.S. Patent No. 5,625,563, hereinafter Rostoker) is respectfully traversed and should be withdrawn.

The rejection of claims 7 and 8 under 35 U.S.C. 103(a) as being unpatentable over Tang and Lien in view of Esnouf (U.S. Patent No. 5,364,108) is respectfully traversed and should be withdrawn.

The rejection of claim 9 under 35 U.S.C. §103(a) as being unpatentable over Tang and Lien in view of Wang et al. (U.S. Patent No. 6,448,820, hereinafter Wang) is respectfully traversed and should be withdrawn.

Tang is directed to simultaneous wired and wireless remote in-system programming of multiple remote systems (Title).

In contrast, the presently claimed invention (claim 1) provides a wireless transceiver coupled to a programmable logic circuit, where (i) the programmable logic circuit comprises a programmable logic device, a processor and a memory circuit in a single integrated circuit package and (ii) the programmable logic device, the processor and the memory circuit are couple together. Claims 15 and 18 include similar limitations. The Office Action asserts that Tang fails to teach a programmable logic device, as presently claimed (see page 2, section 4, lines 7-8 and page 4, section 12, lines 9-10 of the Office Action). Therefore, Tang does not teach or suggest each and every element of the presently claimed invention.

Lien does not cure the deficiencies of Tang. Lien is directed to a method and apparatus for storing a validation number in a field-programmable gate array (Title of Lien). Lien appears silent regarding a wireless transceiver coupled to a programmable logic circuit where (i) the programmable logic circuit comprises a programmable logic device, a processor **and** a memory circuit in a single integrated circuit package, as presently claimed. In particular, Lien states:

In addition to the FPGA 22, the SOC 20 **may** include several other components 24, 26, 28. Any number of other components **may** be included, and the other components **may** include, **for example**, a microprocessor, memory, arithmetic logic unit (ALU), state machine, etc. (column 3, lines 41-45 of Lien, emphasis added).

The single statement in Lien reciting what **may** be included does not require a programmable logic circuit comprise a programmable logic device, a processor **and** a memory circuit in a single integrated circuit package, as presently claimed. Furthermore, since the elements 22, 24, 26 and 28 in FIG. 1 of Lien are not connected, Lien does not teach or suggest that the programmable logic device, the processor and the memory circuit are coupled together, as presently claimed. Therefore, Tang and Lien, alone or in combination do not teach or suggest each and every element of the presently claimed invention. As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

Furthermore, Lien does not appear to address the desirability of the combination as presently claimed. Specifically, Lien illustrates a system on a chip (SOC) 20 having a field-programmable gate array (FPGA) 22 embedded therein **that utilizes a system** for tracking and validating its use in various ICs **in accordance with the present invention** (column 3, lines 29-32 of Lien, emphasis added). Lien also states that "it should be understood however, that **the FPGA 22 may be implemented in its own IC chip with no other components in accordance with the present invention**" (column 3, lines 37-39 of Lien emphasis added).

Lien is directed to the use of the FPGA 22 for providing a system for tracking and validating, monitoring and verifying that license agreements are being honored (column 3, lines 33-37 of Lien). Lien appears silent regarding the implementation of the field-programmable gate array 22 with other components being more desirable than the implementation of the field-programmable gate array 22 in its own IC chip with no other components. As such, Lien does not appear to provide the required suggestion or motivation with respect to the desirability of the combination as presently claimed. Rather, Lien appears to be simply an invitation to experiment.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination (MPEP

§2143.01, citing *In re Mills*, 916 F2d. 680, 16 USPQ2d. 1430 (Fed. Cir. 1990). The factual question of motivation is material to patentability, and cannot be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to a combination of references, simply to "[use] that which the inventor taught against its teacher." (see *In re Lee*, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002) citing *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983)). The Patent Office must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the conclusion (*In re Lee* at 1434).

Furthermore, despite the position taken on pages 2 and 3 of the Office Action that given the teaching of Lien, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Tang by employing the well-known or conventional feature of the apparatus, such as taught by Lien, in order to provide integrating multiple components into a single integrated circuit package, the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness (MPEP §2143.01). Specifically, the Office Action has failed to present specific findings as to the principle or specific understanding within the knowledge of a skilled artisan that would

have motivated the skilled artisan, with no knowledge of the presently claimed invention, to select and combine the references to make the claimed invention. The need for specificity with respect to the motivation for the selection and combination of references pervades the authority. See, for example, *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination "only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references").

Merely stating that a person having ordinary skill in the art, **given** the teaching of Lien, would have readily recognized the

desirability and advantages of modifying Tang by employing the well-known or conventional feature of the apparatus, such as taught by Lien, in order to provide integrating multiple components into a single integrated circuit package (see page 2, last line through page 3, line 3 of the Office Action) does not adequately address or explain why the person having ordinary skill in the art would have selected the cited references. Therefore, the Office Action has failed to present findings sufficient to support a *prima facie* case of obviousness (see MPEP §2143.01). Therefore, the Office Action fails to meet the Office's burden of factually supporting a *prima facie* conclusion of obviousness. As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

With respect to claim 11, since the Office Action asserts that Tang fails to teach a programmable logic device, as presently claimed (see page 2, section 4, lines 7-8 and page 4, section 12, lines 9-10 of the Office Action), it follows that Tang does not and cannot teach or suggest instructions configure the programmable logic device as a device selected from the group consisting of a microprocessor, a micro-controller, and a digital signal processor, as presently claimed. Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* case of obviousness by showing that the cited references teach or suggest each and every element of the presently claimed invention. As

such, claim 11 is fully patentable over the cited references and the rejection should be withdrawn.

With respect to claims 13 and 14, since the Office Action asserts that Tang fails to teach a programmable logic device, as presently claimed (see page 2, section 4, lines 7-8 and page 4, section 12, lines 9-10 of the Office Action), it follows that Tang does not and cannot teach or suggest the programmable logic device comprises one or more memory elements, as presently claimed. Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* case of obviousness by showing that the cited references teach or suggest each and every element of the presently claimed invention. As such, claims 13 and 14 are fully patentable over the cited references and the rejection should be withdrawn.

With respect to claim 17, since the Office Action asserts that Tang fails to teach a programmable logic device, as presently claimed (see page 2, section 4, lines 7-8 and page 4, section 12, lines 9-10 of the Office Action), it follows that Tang does not and cannot teach or suggest configuring the programmable logic device as a processor in response to instructions stored in the memory circuit, as presently claimed. Therefore, the Office Action fails to meet the Office's burden to factually support a *prima facie* case of obviousness by showing that the cited references teach or suggest each and every element of the presently claimed invention.

As such, claim 17 is fully patentable over the cited references and the rejection should be withdrawn.

With respect to claim 3, Deming does not cure the deficiencies of Tang and Lien. Deming is directed to a method and apparatus for in system programming of a programmable logic device using a two wire interface (Title of Deming). The Office has previously admitted that Deming fails to teach or suggest a programmable logic circuit where the programmable logic circuit comprises a programmable logic device, a processor and a memory circuit in a single integrated circuit package (see page 2, paragraph no. 5, last five lines of the Office Action dated November 22, 2002). Therefore, the combination of Tang and Deming does not teach or suggest each and every element of the presently claimed invention. As such, the presently claimed invention is fully patentable over Tang and Deming (see MPEP §2142) and the rejection should be withdrawn.

With respect to claims 4, 16 and 19, Rostoker does not appear to cure the deficiencies of Tang and Lien. The conclusory statement that "given the teaching of Rostoker, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modify the combination of Tang and Lien by employing the well-known or conventional feature of the apparatus, the method and the apparatus, such as taught by Rostoker, in order to provide simple and inexpensive integrated

circuit assemblies" does not adequately address the issue of motivation. Specifically, the cited portions of Rostoker state:

What is needed is a method and system for reducing the required number of input output pins necessary for communicating between complex integrated circuits that required high data throughput and **are contained in simple and inexpensive integrated circuit assemblies** (column 2, lines 54-58 of Rostoker, emphasis added).

The cited portion of Rostoker does not appear to teach or suggest **providing simple and inexpensive integrated circuit assemblies**, but rather appears to speak to reducing the required number of input output pins on devices that **are already contained in simple and inexpensive integrated circuit assemblies**. Furthermore, the Office Action is silent regarding how the teachings of Rostoker would be used with Tang and Lien to provide simple and inexpensive integrated circuit assemblies. As such, the Office Action fails to meet the Office's burden of factually supporting a *prima facie* conclusion of obviousness and the rejection should be withdrawn.

With respect to claims 7 and 8, Esnouf does not cure the deficiencies of Tang and Lien. Esnouf is directed to a game apparatus. Esnouf appears silent regarding a programmable logic device, a processor and a memory circuit in a single integrated circuit package, as presently claimed. As such, Esnouf does not and cannot cure the deficiencies of Tang. Therefore, neither Tang nor Esnouf, alone or in combination, teach or suggest each and every element of the presently claimed invention. As such, the

presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

With respect to claim 9, Wang does not cure the deficiencies of Tang and Lien. Wang is directed to a fast locking phase frequency detector. Despite the position taken in the Office Action, Wang does not teach a programmable logic circuit wherein said programmable logic circuit comprises a programmable logic device, a processor and a memory circuit in a **single integrated circuit package**, as presently claimed. In particular, Wang explicitly states that FIG. 1 shows a block diagram of a digital system that may be provided on a **single board, on multiple boards, or even within multiple enclosures**. Since Wang is directed to a system which is provided on a single board or on multiple boards or even within multiple enclosures, Wang clearly is not suggestive of a programmable logic device, a processor and a memory circuit in a **single integrated circuit package**, as presently claimed. Furthermore, the inclusion of fixed and flexible disk media and PC card flash disk memory as examples of devices represented by the memory 105 in FIG. 1 of Wang further evidences that Wang does not teach or suggest a single integrated circuit package, as presently claimed (FIG. 1 and column 3, lines 61-65 of Wang). Therefore, Wang does not cure the deficiencies of Tang and Lien. Thus, Taylor, Lien and Wang, alone or in combination, do not teach or suggest each and every element of the presently claimed invention.

As such, the presently claimed invention is fully patentable over the cited references and the rejection should be withdrawn.

Claims 2-14, 16-17 and 19-20 depend, either directly or indirectly, from claims 1, 15 and 18 which are believed to be allowable. As such, the presently claimed invention is fully patentable over the cited references and the rejections should be withdrawn.

New claims 21-24 depend directly from claim 18 which is believed to be allowable. Furthermore, the claims 21, 23 and 24 recite interfaces configured to couple the programmable logic device with (i) the memory circuit (claim 21), (ii) the processor (claim 23) and (iii) both the memory circuit and the processor (claim 24). Since the Office Action asserts that Tang fails to teach a programmable logic device, as presently claimed (see page 2, section 4, lines 7-8 and page 4, section 12, lines 9-10 of the Office Action) and Lien is silent regarding interfaces as presently claimed, it follows that Tang and Lien do not teach or suggest each and every element of the presently claimed invention. As such, the presently claimed invention is fully patentable over the cited references.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge our office Account No. 50-0541.

Respectfully submitted,

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